

What is Claimed Is:

1. A optical connector for terminating an optical fiber, comprising:
  - a housing configured to mate with an LC receptacle, said housing comprising a polymer material that does not deform when exposed to temperatures of at least 210°C; and
    - a ferrule assembly, said ferrule assembly including a ferrule portion and a barrel portion, said ferrule assembly preloaded with a thermoplastic adhesive material.
2. The optical connector of claim 1, wherein the thermoplastic material is a polyamide-based hot melt adhesive.
- 10 3. The optical connector of claim 1, wherein the thermoplastic material is an ultra high temperature hot melt adhesive.
4. The optical connector of claim 3, wherein the ultra high temperature hot melt material has a melt viscosity of 1000-20,000 cp in a temperature range of about 200°C to about 250°C.
- 15 5. The optical connector of claim 3, wherein the ultra high temperature hot melt material has a Shore D hardness of about 50 to about 85 at room temperature.
6. The optical connector of claim 3, wherein the ultra high temperature hot melt material has a Shore D hardness of about 50 to about 57.
- 20 7. The optical connector of claim 3, wherein the ultra high temperature hot melt material comprises a semi-crystalline material having from about 15% to about 35% crystallinity.
8. The optical connector of claim 3, wherein the ultra high temperature hot melt material has a Young's Modulus greater than about  $1 \times 10^7$  psi within an operational temperature of about -40°C to about 85°C.

9. The optical connector of claim 1, wherein the polymer material does not deform when exposed to temperatures of about 210°C to about 270°C.

10. The optical connector of claim 1, further comprising an optical fiber terminated in the ferrule by said thermoplastic adhesive, wherein the terminated connector has an operational temperature range of about -40°C to about +85°C.

5 11. The connector of claim 1, wherein the barrel portion comprises an elongated heat conductive tube.

12. The optical connector of claim 1, further comprising an optical fiber terminated in the ferrule by said thermoplastic adhesive, wherein the optical fiber is  
10 resettable in the ferrule assembly by the application of heat, then the removal of heat.

13. An optical connector for terminating an optical fiber, comprising:  
a housing comprising a material that does not deform when exposed to  
temperatures of at least 210°C; and  
a ferrule assembly, said ferrule assembly including a ferrule portion and a  
15 barrel portion, said ferrule assembly preloaded with a thermoplastic adhesive material,  
wherein the thermoplastic material is an ultra high temperature hot melt adhesive.

14. The connector of claim 13, wherein the ultra high temperature hot melt  
material has a melt viscosity of 1000-20,000 cp in a temperature range of about 200°C  
to about 250°C.

20 15. The connector of claim 13, wherein the ultra high temperature hot melt  
material has a Shore D hardness of about 50 to about 85 at room temperature.

16. The connector of claim 12, wherein the ultra high temperature hot melt  
material comprises a semi-crystalline material having a 15% to about 35%  
crystallinity.

17. The connector of claim 12, wherein the housing comprises a polymer material and the housing is configured to mate with an LC receptacle.

18. The connector of claim 12, wherein the connector comprises one of an SC-type connector, a FC-type connector, an MT-type connector, an MU-type connector, and an ST-type connector.

19. An optical fiber connector, comprising:

a housing configured to mate with an LC receptacle;

5 a ferrule assembly, said ferrule assembly including a ferrule portion and a barrel portion, said ferrule assembly preloaded with a thermoplastic adhesive material;

10 and

an optical fiber terminated in the ferrule by said thermoplastic adhesive, wherein the optical fiber is resetable in the ferrule assembly by the application of heat, then the removal of heat.

20. A optical connector for terminating an optical fiber, comprising:

15 a housing configured to mate with an MU-type receptacle, said housing comprising a polymer material that does not deform when exposed to temperatures of at least 210°C; and

a ferrule assembly, said ferrule assembly including a ferrule portion and a barrel portion, said ferrule assembly preloaded with a thermoplastic adhesive material.

20 21. A optical connector for terminating an optical fiber, comprising:

a housing configured to mate with an MT-type receptacle, said housing comprising a polymer material that does not deform when exposed to temperatures of at least 210°C; and

25 a ferrule assembly, said ferrule assembly including a ferrule portion and a barrel portion, said ferrule assembly preloaded with a thermoplastic adhesive material.